



# PATENT SPECIFICATION

DRAWINGS ATTACHED

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## COMPLETE SPECIFICATION

### A Venetian Blind

We, HUNTER DOUGLAS INTERNATIONAL (QUEBEC) LTD., a Corporation organized and existing under the Laws of the Province of Quebec, of 9500 St. Lawrence Boulevard, Montreal, Province of Quebec, Canada, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to a venetian blind of the kind in which the slats are suspended from tilt cords or strings having part thereof looped over a displaceable tilting and winding spindle over which the lift cords or strings for raising and lowering the slats can be wound and the tilt cords or strings and the depending portions of the lift cords or strings are situated in planes which are perpendicular or substantially perpendicular to the Venetian blind. In Venetian blinds of this kind the slats usually have a small width. As the tilt cords or string belonging to one set and the lift cords or strings are situated in one and the same plane, the drawback occurs that these cords or strings interfere with each other when raising the blind. As a result the turns of the lift cords or strings do not lie regularly side by side, but one above the other, in consequence of which not all the lift cords are moved upward in a regular manner and therefore the slats of the blind are crookedly positioned. Another drawback is that when raising the blind the tilt cords get caught between the lift cords on the winding spindle. This results in jamming of the blind and there is a risk that the tilt cords will break.

These drawbacks are avoided by the Venetian blind according to the invention, in that there is positioned around or near the spindle for each set of tilt and lift cords or strings a separating element on one side of which the lift cords or strings are situated and on the other side of which the tilt cords or strings are situated. As the separating

element always reliably prevents the cords or strings from coming together at the winding position of the lift cords or strings, the tilt cords can never interfere with the lift cords.

According to a further feature of the invention, the separating element may consist of a ring in relation to which the winding spindle can rotate freely. This ring may rest in a freely rotatable manner upon the winding spindle. It is, however, possible by way of alternative to provide a member that is firmly fixed in the head rail of the Venetian blind. This member may for instance consist of a plate which, if it is thin, is preferably provided on one side with a folded border or a beading to prevent damage to the winding cords.

In one preferred embodiment of Venetian blind according to the invention either a part of, or all the side of the separating member which faces the lift cord or string is arranged at an angle to the depending portion of the lift cords to determine the pitch of the turns of the lift cord or string.

The invention will be described in the following by reference to the accompanying drawings, showing by way of example some embodiments of Venetian blind according to the invention.

Fig. 1 is a diagrammatic representation of this embodiment, partly in cross-section and partly in elevation, in which two different separating elements are shown.

Fig. 2 gives on an enlarged scale a detail of another embodiment.

The Venetian blind represented in the drawing has a head rail 1 in which is mounted a winding and tilting spindle 2 that can be rotated by means of a driving device, of a well known type. Upon this spindle 2 tilt cords 4 are positioned so that these tilt cords can slide over the spindle. When the actuating device 3 is rotated for the lifting of the blind, the tilt cords 4 are moved first, as a result of which the slats 5 are turned sufficiently far

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to close the blind. After this the spindle 2 continues to rotate and the tilt cords 4 slip on the spindle. When the driving device 3 is rotated, the lift cords 6 are wound on to the spindle 2. In order that the turns of the lift cords 6 may not come to lie over each other, one of the journals 7 on which the spindle 2 is rotatably positioned is provided with a screw thread which rests in the screw thread of the head end 8 of spindle 2. As a result spindle 2 is displaced longitudinally during rotation.

As the tilt cords and the depending portions of the lift cords are in planes situated perpendicular to the blind, there is a risk that the tilt cords will come between the lift cords during winding, as a result of which these cords may become damaged or severed. In order to avoid this risk there are separating elements which may be mounted on the winding or tilting spindle 2, on one side of which separating elements the lift cords 6 are situated and on the other side the tilt cords 4. In the left half of fig. 1 the separating element is in the form of a ring 9 which rests freely rotatably upon the spindle 2. In the right half of fig. 1 the separating element is represented as a plate 10 firmly positioned in the head rail, which plate 10 is fixed in the upper beam at an angle to the depending portion of the lift cord to determine the pitch of the turns of the lift cord 6. If desired, the separating element may be formed as a ring freely rotatable on spindle 2, which ring is held in an inclined position by means of stop pieces not shown in the drawing. As an alternative, only the bottom part of the separating element 10 may be inclined according to the pitch of the turns of the lift cord 6. Fig. 2 shows a separating wall firmly fixed to head rail 1, which separating wall is perpendicular to the head rail 1. The bottom part of this separating wall 11 may be bevelled according to the pitch of the turns of the lift cord 6.

It is obvious that the invention is not limited to the embodiments described as examples in the foregoing and represented in the drawings, but may be varied in numerous ways without departing from the scope of the invention, as set out in the appended claims.

#### WHAT WE CLAIM IS:—

1. A Venetian blind in which the slats are suspended from tilt cords or strings each having part thereof looped over a longitudinally displaceable tilting and winding spindle on to which lift cords or strings for raising and lowering the slats can be wound, wherein the tilt cords or strings and the corresponding lift cords or strings are in planes situated perpendicular or substantially perpendicular to the Venetian blind, there being positioned around or near the spindle for each set of tilt and lift cords or strings a separating element on one side of which the lift cords or strings are situated and on the other side of which the tilt cords or strings are situated.

2. A Venetian blind according to claim 1, wherein the separating elements each consist of a ring in relation to which the winding spindle can freely rotate.

3. A Venetian blind according to claim 1, wherein the blind is provided with a head rail and the separating elements consist of a plate or wall fixed to this head rail.

4. A Venetian blind according to any one of the foregoing claims, wherein either a part, or all of the side of the separating element which faces the lift cord or string is arranged at an angle to the depending portion of the lift cord to determine the pitch of the turns of the lift cord or string.

5. A Venetian blind, substantially as hereinbefore described and illustrated with reference to the accompanying drawings.

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COMPLETE SPECIFICATION

1 SHEET

*This drawing is a reproduction of  
the Original on a reduced scale*

